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11 Oct 67

25X1A

## DECLASS REVIEW by NIMA/DOD

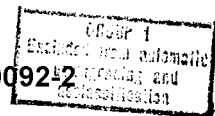
MEMORANDUM FOR: ~~See Distribution~~ *the record*SUBJECT :   Chip Comparator Progress Report

25X1A

1. During the period 2-4 August   personnel *installed* 25X1A a temporary field modification to the 405 AM chip comparator to keep it in an operational status until such time as <sup>it</sup> ~~the 405B models~~ can be sent to the factory for permanent modifications, ~~and returned to the NPIC~~. On the 17th, 25X1A 18th and 23rd of August the   ~~technical~~ (technician) returned to make minor adjustments to the machine. (Adjustments of the type made were not unusual since equipment of this nature frequently requires a slight returning shortly after a major change (field modification)). Since the 23rd of August no maintenance adjustments of any sort have been made to the instrument except for water replenishment.

2. TDS will observe the operational reliability of the comparators without making any maintenance adjustments until the reliability drops below acceptable limits in order to determine mean time between failure. As soon as sufficient data is available a routine preventative maintenance schedule will be set up to keep <sup>all the</sup> ~~the~~ comparators in peak operating condition. ~~at all times.~~

3. At present, two 405B comparators are at   for the modi- 25X1A fications considered necessary to make them operationally reliable. It was originally estimated that these two machines would be returned to the NPIC, *by 1 October,* 25X1A but   requested additional time because of difficulties with delivery of required optical subcomponents and additional design analysis work they were performing <sup>on the Interferometers.</sup> It is now anticipated that the two 405B's will be returned by the <sup>middle of November,</sup> ~~end of the month,~~ at which time two more machines will be returned for modification, *if the funding is available.*

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SUBJECT: [ ] Chip Comparator Progress Report

4. Based on the performance record of the 405AM for the past two months, indications are that the fundamental operational reliability problems with the chip comparators have been resolved, but that additional funding will be required. A cost analysis and work statement has been received 25X1A from [ ] and is being forwarded to the respective components under separate memo for action.

5. An additional consideration concerning the operational use of the chip comparators, not previously covered, is the availability of computer time and software. Since four <sup>out of the six</sup> ~~of six of the~~ chip comparators are exclusively ~~the~~ on-line <sup>therefor,</sup> the operational availability of the chip comparators must take into consideration the data processing as an essential element of consideration. It is my understanding from talking to IAS, TDS, and DIA personnel, that the data processing problem is of extreme concern to them. Also affecting the operational acceptability of the chip comparators are the building facility requirements and training programs. Since the chip comparators are highly sophisticated pieces of equipment they impose special building facility and training requirements on the Center.

6. In summary, TDS feels that the solution for the basic reliability and maintainability of the chip comparators has been resolved <sup>from the technical viewpoint,</sup> but that the operational acceptability is dependent upon additional considerations <sup>required additional funding, the</sup> beyond its control, namely the data processing capability, training, and building facility maintenance.

Tech. asst. [ ]  
Spec. asst. [ ]

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Distribution:  
~~Exec. Director~~  
PAG  
IAS  
TID

DIA (Attn. [ ]  
TDS/EPS  
TDS/DS  
Asst. for ID

25X1A

Support Systems Branch, TDS/DS

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Note to go on  
Buck slips

In view of the interest concerning  
the the operational status of the  
chip comparators, the attached  
memo for the ~~Records~~ Record is  
being forwarded to keep you  
up to date on TDS progress in this  
matter

STATINTL

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*Craft*  
*Draft*  
Memo for : see Dist. List

25X1A

Subject :  Chip Comparators  
Progress Report

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Since the 23rd of ~~Aug~~ August no maintenance adjustment of any sort have been made to the instrument except for water replenishment. ~~It~~

~~is the~~

It is the intent of the FOS to observe the operational <sup>reliability</sup> of the machine comparator, without making any maintenance adjustments, until the reliability drops below acceptable limits.

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2. TDS will observe the operational reliability of the ~~comparators~~ comparators, without making any maintenance adjustments, until the reliability drops below acceptable limits. in order to determine mean time between failure. <sup>As soon as</sup> ~~the~~ sufficient data is available a routine preventative maintenance schedule will be set up to keep the comparators in peak operating condition at all times.

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25X1A

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25X1A  
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Dist. Ex Dir

PAG

IAS

TID

DIA

ATTN

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TDS/EPS

TDS/DS

AUF for TD

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Chip

Comparator